Calcul des séquents intuitionniste (LJ)

Calcul des séquents intuitionniste (LJ)

Règles

$$\overline{\Gamma, A \vdash A}$$
 ax $\overline{\Gamma, A \vdash B}$ cont

$$\frac{\Gamma \vdash A \qquad \Gamma, B \vdash C}{\Gamma, A \Rightarrow B \vdash C} \Rightarrow_{\mathsf{left}} \qquad \frac{\Gamma, A \vdash B}{\Gamma \vdash A \Rightarrow B} \Rightarrow_{\mathsf{right}}$$

$$\frac{\Gamma \vdash A \qquad \Gamma, B \vdash C}{\Gamma, A \Leftrightarrow B \vdash C} \Leftrightarrow_{\mathsf{left}1}$$

$$\frac{\Gamma \vdash B \qquad \Gamma, A \vdash C}{\Gamma, A \Leftrightarrow B \vdash C} \Leftrightarrow_{\mathsf{left2}} \qquad \frac{\Gamma, A \vdash B \qquad \Gamma, B \vdash A}{\Gamma \vdash A \Leftrightarrow B} \Leftrightarrow_{\mathsf{right}}$$

$$\frac{\Gamma, A, B \vdash C}{\Gamma, A \land B \vdash C} \land_{\mathsf{left}} \qquad \frac{\Gamma \vdash A \qquad \Gamma \vdash B}{\Gamma \vdash A \land B} \land_{\mathsf{right}}$$

$$\frac{\Gamma \vdash A}{\Gamma \vdash A \lor B} \lor_{\mathsf{right}1}$$

$$\frac{\Gamma, A \vdash C \qquad \Gamma, B \vdash C}{\Gamma, A \lor B \vdash C} \lor_{\mathsf{left}} \qquad \frac{\Gamma \vdash B}{\Gamma \vdash A \lor B} \lor_{\mathsf{right2}}$$

$$\frac{\Gamma \vdash A}{\Gamma, \neg A \vdash B} \neg_{\mathsf{left}}$$

$$\overline{\Gamma, \bot \vdash A}$$
 \bot_{left}

$$\frac{\Gamma, A \vdash \bot}{\Gamma \vdash \neg A} \neg_{\mathsf{right}}$$

$$\frac{}{\Gamma \vdash \top}$$
 \top_{right}

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Preuves à l'ordre 1

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Calcul des séquents intuitionniste (LJ)

Calcul des séquents classique (LJ_{em})

Règles

$$\frac{\Gamma, A(t) \vdash B}{\Gamma, \forall x. A(x) \vdash B} \forall_{\mathsf{left}} \qquad \frac{\Gamma \vdash A(x)}{\Gamma \vdash \forall x. A(x)} \forall_{\mathsf{right}}, \ x \notin \Gamma$$

$$\frac{\Gamma, A(x) \vdash B}{\Gamma, \exists x, A(x) \vdash B} \exists_{\mathsf{left}}, \ x \not\in \Gamma, B \qquad \frac{\Gamma \vdash A(t)}{\Gamma \vdash \exists x, A(x)} \exists_{\mathsf{right}}$$

$$\frac{\Gamma \vdash A \qquad \Gamma, A \vdash B}{\Gamma \vdash B} \text{ cut}$$

Règles

$$\frac{\Gamma, A(t) \vdash B}{\Gamma, \forall x. A(x) \vdash B} \, \forall_{\mathsf{left}} \qquad \frac{\Gamma \vdash A(x)}{\Gamma \vdash \forall x. A(x)} \, \forall_{\mathsf{right}}, \ x \not\in \Gamma$$

$$\frac{\Gamma, A(x) \vdash B}{\Gamma, \exists x. A(x) \vdash B} \exists_{\mathsf{left}}, \ x \not\in \Gamma, B$$

$$\frac{\Gamma \vdash A(t)}{\Gamma \vdash \exists x. A(x)} \exists_{\mathsf{right}}$$

$$\frac{\Gamma \vdash A \qquad \Gamma, A \vdash B}{\Gamma \vdash B} \operatorname{cut}$$

$$\frac{\Gamma \vdash \neg \neg A}{\Gamma \vdash A} \text{ em}$$

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